

# INTERNATIONAL SEARCH REPORT

Application No  
PCT/US2005/006396

## A. CLASSIFICATION OF SUBJECT MATTER

INV. C07K14/82 C12N15/11 C12N15/63 A61K48/00 C12N5/10

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

C07K C12N A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, EMBASE, BIOSIS, Sequence Search

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X, P, L	<p>WO 2004/070002 A (THE GOVERNMENT OF THE UNITED STATES OF AMERICA AS REPRESENTED BY THE S) 19 August 2004 (2004-08-19)</p> <p>abstract page 2, lines 10-30 page 3, lines 3-11 page 43, lines 12-33 page 47, lines 10-14 pages 51-58 examples 3-13 SEQ ID No.5-7 and 118</p> <p>----- -/-</p>	<p>1,4-9, 15,16, 19, 21-26, 29-59</p>

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier document but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

"A" document member of the same patent family

Date of the actual completion of the international search

27 October 2005

Date of mailing of the international search report

29.03.2006

Name and mailing address of the ISA

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### Box No. I Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)

1. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, the international search was carried out on the basis of:

a. type of material

☒

a sequence listing

☐

table(s) related to the sequence listing

b. format of material

☒

In written format

☒

in computer readable form

c. time of filing/furnishing

☐

contained in the international application as filed

☐

filed together with the international application in computer readable form

☒

furnished subsequently to this Authority for the purpose of search

2. ☒ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

3. Additional comments:

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	CHEN L, ET AL.: "HIGH RESOLUTION CRYSTAL STRUCTURE OF HUMAN RAB9 GTPASE" THE JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 279, no. 38, 2004, pages 40204-40208, XP009055166 page 40204, column 2, paragraph 2 abstract	1,4-9, 15,16, 19, 21-26, 29-59
A	BL0T G ET AL: "Targeting of the human immunodeficiency virus type 1 envelope to the trans-Golgi network through binding to TIP47 is required for Env incorporation into virions and infectivity" JOURNAL OF VIROLOGY, THE AMERICAN SOCIETY FOR MICROBIOLOGY, US, vol. 77, no. 12, June 2003 (2003-06), pages 6931-6945, XP009018955 ISSN: 0022-538X the whole document	1,4-7

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national application No.  
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## Box II Observations where certain claims were found unsearchable (Continuation of Item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 1-39 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:  
  
1, 4-9, 15, 16, 19, 21-26, 29-59 (partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1,4-9,15,16,19,21-26,29-59 (partially)

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of Rab9A in the host cell by contacting the mRNA encoding Rab9A with the siRNA of SEQ ID No.5, method of treating a pathogen infection in a host subject using said siRNA, cell transfected with said siRNA, non-human transgenic animal expressing it, said siRNA, and vector comprising said siRNA.

2. claims: 1,4-9,15,16,19,21-26,29-59 (partially)

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of Rab9A in the host cell by contacting the mRNA encoding Rab9A with the siRNA of SEQ ID No.6, method of treating a pathogen infection in a host subject using said nucleic acid molecule, cell transfected with said nucleic acid molecule, non-human transgenic animal expressing it, said nucleic acid molecule, and vector comprising said nucleic acid molecule.

3. claims: 1,4-9,15,16,19,21-26,29-59 (partially)

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of Rab9A in the host cell by contacting the mRNA encoding Rab9A with the siRNA of SEQ ID No.7, method of treating a pathogen infection in a host subject using said nucleic acid molecule, cell transfected with said nucleic acid molecule, non-human transgenic animal expressing it, said nucleic acid molecule, and vector comprising said nucleic acid molecule.

4. claims: 1,4-9,15,16,19,21-26,29-59 (partially)

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of Rab9A in the host cell by contacting the mRNA encoding Rab9A with the siRNA of SEQ ID No.8, method of treating a pathogen infection in a host subject using said nucleic acid molecule, cell transfected with said nucleic acid molecule, non-human transgenic animal expressing it, said nucleic acid molecule, and vector comprising said nucleic acid molecule.

5. claims: 1,4-9,15,16,19,21-26,29-59 (partially)

## FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of Rab9A in the host cell by contacting the mRNA encoding Rab9A with the siRNA of SEQ ID No.9, method of treating a pathogen infection in a host subject using said nucleic acid molecule, cell transfected with said nucleic acid molecule, non-human transgenic animal expressing it, said nucleic acid molecule, and vector comprising said nucleic acid molecule.

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## 6. claims: 1,4-9, 16,19,21-25,27,29-59 (partially)

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of Rab9A in the host cell by contacting the mRNA encoding Rab9A with an antisense RNA sequence that recognises the mRNA, method of treating a pathogen infection in a host subject using said nucleic acid molecule, cell transfected with said nucleic acid molecule, non-human transgenic animal expressing it, said nucleic acid molecule, and vector comprising said nucleic acid molecule.

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## 7. claims: 1,4-9,16,19,21-25,28-59 (partially)

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of Rab9A in the host cell by contacting the mRNA encoding Rab9A with a ribozyme RNA sequence that recognises the mRNA, method of treating a pathogen infection in a host subject using said nucleic acid molecule, cell transfected with said nucleic acid molecule, non-human transgenic animal expressing it, said nucleic acid molecule, and vector comprising said nucleic acid molecule.

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## 8. claims: 1,4-8,16,18,20-59 (partially), 14 (completely)

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of Rab11A in the host cell, method of treating a pathogen infection in a host subject by decreasing the activity of Rab11A, cell comprising a functional deletion of Rab11A, non-human transgenic animal comprising a functional deletion of Rab11A, nucleic acid molecule of SEQ ID No.16-19, 49-50 and 59-60, and vectors comprising said nucleic acid molecules.

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## 9. claims: 1, 2, 4-9,15-59 (partially), 10-13 (completely)

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

A method of decreasing infection of a host cell by a pathogen, comprising decreasing the activity of a Rab9A modulator that increases Rab9A activity in the host cell, method of treating a pathogen infection in a host subject by a pathogen, comprising decreasing the activity of a Rab9A modulator that increases Rab9A activity in said host cell, cell comprising a functional deletion of said modulator, non-human transgenic animal comprising a functional deletion of said modulator, nucleic acid molecules of SEQ ID No.20-32, 51-56 and 61-66, and vectors comprising said nucleic acid molecules.

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Initial Application No  
PCT/US2005/006396

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 2004070002 A	19-08-2004	AU 2003303308 A1	30-08-2004
		CA 2506619 A1	19-08-2004
		EP 1613724 A2	11-01-2006

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